

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-14 and 32-46 have been rejected under 35 U.S.C. § 102 as being anticipated by WO 94/04313 (hereinafter WO '313) and Claims 1-14 and 32-46 have been rejected under 35 U.S.C. § 102 as being anticipated by WO 82/0101844 (hereinafter WO '844). Claims 4 and 35 have been canceled, without prejudice, and thus, Claims 1-3, 5-14, 32-34, and 36-46 remain active.

The discussion granted by Examiner Markoff is hereby acknowledged and is sincerely appreciated. During such discussion, the Examiner explained in greater detail his interpretation of the teachings of WO '313 as well as WO '844 in support of the rejections made in the Office Action of February 13, 2007, including the rejection of dependent Claims 4 and 35 which claim a cleaning system wherein an elastic covering material encases the magnetic substance. Applicants' attorney indicated that a further review of these references based upon the Examiner's comments would be made and the results of such review are reflected in the remarks set forth below. Examiner Markoff was also invited to contact Applicants' attorney to further discuss this matter in the event such is believed to be helpful.

Considering first then the rejection of Claims 1-14 and 32-46 under 35 U.S.C. § 102 as being anticipated by WO '313, Applicants note that, as explained on page 16 paragraph [0075]:

“In the fourth embodiment of the invention, as shown in Fig.5, the cleaning medium 3 constructed with the magnetic material 4 such as the magnetic fluid 11 is enclosed in an elastic covering material such as a soft covering film 13 and put in the state of shutting up the entire portion of the cleaning medium 3 in the covering film 13. The film 13 is constructed with the material, for instance, a thin rubber, a cloth not transmitting the fluid, or a diaphragm, etc. As shown in Fig.5, when the magnetic field generating device 5 is moved, the inner wall

surface 7 on the area to be cleaned of the cleaned object 2 is rubbed with the film 13, and thereby the cleaned object is cleaned. Furthermore, since the cleaning medium 3 is enclosed in the film 13, the cleaning medium 3 can be used again without being polluted by the dirt. Consequently, it is possible to reduce the cost required for performing the cleaning works”.

In view of the advantages provided by enclosing the cleaning medium in a film so that the cleaning medium can be used again without being polluted so as to reduce the cost for performing cleaning, each of Claims 1 and 32 have been amended to claim the fact that the magnetic substances enclosed in an elastic covering material. This clearly differs from WO ‘313 which only discloses utilization of a mount 16 adapted for positioning an object in contact with a fluid 11 and means for moving the fluid 11 and the mount 16 with respect to one another. Insofar as a review of WO ‘313 fails to indicate any suggestion of placing a magnetic substance in an elastic covering material as claimed in Claims 14 and 32, it is submitted that such claims clearly patentably define over WO ‘313.

In view of the Examiner’s comments during the discussion noted above regarding the teachings of WO ‘313, it is noted that during such discussion the Examiner particularly emphasized the discussion at page 13, lines 24-32 of such reference and stated that such indicates that the abrasive particles in the suspensions are held in position relative to the work-piece by the magnetorheological fluid and that, more particularly, by varying the effective viscosity, plasticity and elasticity of the magnetorheological fluid, wherein the rigidity of the matrix holding the abrasive particle may be changed, thus varying the level of cutting force applied to the work-piece. Applicants note that, as can be appreciated from a review of the above-noted language, the plasticity and elasticity varied are actually of the magnetorheological fluid which would therefore clearly not suggest placing a magnetic substance in an elastic covering material as presently claimed. By comparison, in the present invention, the cleaning medium 3 is enclosed in a film 13 so that the cleaning medium 3 can

be used again without being polluted by dirt and consequently, and thus makes it possible to reduce the cost required for performing cleaning.

Applicants further note that the objective of WO '313 is for performing abrasion by polishing, unlike the object of the present invention which is to clean an object. Due to these differences and objective, it clearly would not be obvious to one of ordinary skill in the art to modify WO '313 to meet Applicants' claimed limitations.

Applicants additionally note that, with respect to WO '313, the steps needed in making a functioning surface of the abrasive tools conform to the surface formed of a product, the surface of a complex tool for abrasion is necessarily complicated. The object of WO '313 is to solve this problem. As can be thus be appreciated, in WO '313, the abrasion area is set in the magnetorheological polishing fluid (MP-fluid) the viscosity of the magnetorheological polishing fluid is controlled to form the abrasion surface. A material to be abraded is brought into contact with the abrasion surface formed by the magnetorheological polishing fluid in the abrasion area. The material to be abraded is abraded by moving the material and the magnetorheological polishing fluid. The magnetorheological polishing fluid is controlled by the magnetic field.

WO 94/04313 describes the technology in which a material is abraded by controlling the magnetorheological polishing fluid (MP-fluid) (corresponding to the cleaning medium of the present invention) with the magnetic field (corresponding to the magnetic field generating device of the current claim).

As described above, the objective of the invention of WO 94/04313 is to avoid complexity of the surface of a complex for abrasion by controlling the magnetorheological polishing fluid (MP-fluid) with the magnetic field and is different from the object of the present invention, which is to easily clean by a simple device the inside of a material to be cleaned which a hand or an instrument is difficult to reach.

In view of the foregoing, it is submitted that each of Claims 1 and 32 clearly patentably define over WO '313 as well as the remaining references of record.

Considering next then the rejection of Claims 1-14 and 32-46 under 35 U.S.C. § 102 as being anticipated by WO '844, it is to be noted that in WO '844, a part to be deburred in a functioning body are placed in a container and the functioning body is moved by alternating a magnetic field (since the functioning body is formed of a material acting in an alternate magnetic field) such that the part to be deburred and the functioning body are brought into contact with each other for deburring.

During the discussion, the Examiner particularly emphasized the untranslated language appearing at page 13 of WO '844. More particularly, based upon the Examiner's familiarity with the Russian language, the Examiner indicated that page 13, lines 14-20 include an application of using working bodies armed with plastic material. In order to assist advancing the prosecution of the present application, Applicants have obtained the enclosed certified translation (Attachment A) of this portion of WO '844 and note that this paragraph reads as follows:

“In the process of removing the fin and burr from rubber and plastic products, it is advisable to use working bodies, for example, made of plastic and reinforced with magnetic material, due to which no disruption of metal plating occurs during impact.”

As can thus be appreciated, this disclosure is directed to the removal of fins and burs from rubber and plastic products and contains no suggestion of Applicants' claimed invention. More particularly, since there is no mention in this portion of WO '844 or any other portion thereof of a magnetic substance which is enclosed in an elastic covering material, it is submitted that each of independent Claims 1 and 32 clearly patentably define over WO '844. As can also be appreciated, there is clearly no teaching or disclosure of the above-emphasized limitations of Claims 1 and 32 and any attempt to modify WO '844 to

meet applicants claimed invention would clearly render such reference inoperative for its intended purpose and function. It is therefore submitted that each of Claims 1 and 32 clearly patentably define over WO '844 as well as the remaining references of record.

Each of Claims 2, 3, 5-14, 32-34, and 36-46 contain additional limitations which have no corresponding teachings or disclosure in the above-noted references or any of the remaining references of record. In view of this and in view of the arguments in support of the patentability of Claims 1 and 32, it is submitted that the above-noted dependent claims also merit indication of allowability.

Applicants lastly note that the object of the present invention is to easily clean with a simple device the inside of a material to be cleaned by hand or with an instrument is difficult to reach.

In the present invention, a cleaning medium containing a magnetic substance is introduced into the portion to be cleaned in a material. The cleaning medium is moved in a magnetic field generated by a magnetic field generating device so that the cleaning medium is abraded with the portion to be cleaned. Thus, it is possible to clean the inside of a material which a hand or an instrument is difficult to reach by using a simple device. Especially, the present invention has "a structure in which a cleaning medium is sealed in a flexible covering material" as presently claimed. Thus, the cleaning medium is not contaminated by a filthy substance and can be re-used in a recycling manner, which leads to cost reduction.

As mentioned above, the present invention has "a structure in which a cleaning medium is sealed in a flexible covering material" as presently claimed so that the cleaning medium is not contaminated by a filthy substance and can be re-used in a recycling manner, which leads to cost reduction. On the other hand, in the cited references, there is no mention about "a structure in which a cleaning medium is sealed in a flexible covering material".

Each of the objectives of the inventions of the cited references is directed to abrasion. In light of abrasion, the surface of an abrasive agent should be rubbed against a material to be abraded. It is impossible to have a structure in which the abrasive agent is sealed in a covering material. Therefore, there is no disclosure in the cited references about the structure described in the present invention so that the inventions of the cited references do not have the effect claimed by the present invention.

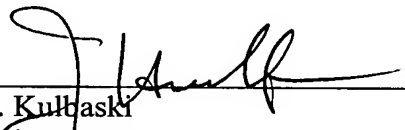
In view of the foregoing, an early and favorable Office Action is believed to be in order and the same is hereby respectfully requested.

Respectfully submitted,

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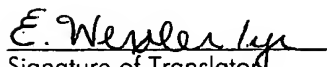
## TRANSLATOR CERTIFICATION

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**Morningside** | Translations

I, Eugene Wexler, a translator fluent in the Russian language, on behalf of Morningside Evaluations and Consulting, do solemnly and sincerely declare that the following is, to the best of my knowledge and belief, a true and correct translation of the document(s) listed below in a form that best reflects the intention and meaning of the original text.

### MORNINGSIDE EVALUATIONS AND CONSULTING

  
Signature of Translator

Date: May 11, 2007

Description of Documents Translated: Ref. 244136US\_557-557-2 DIV

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Attachment A



In the process of removing the fin and burr from rubber and plastic products containing conductive with metal plating\*, it is advisable to use working bodies, for example, made of plastic and reinforced with magnetic material, due to which no disruption of metal plating occurs during impact.

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\* conductive what? - something seems to be missing in the original – Translator's note